

ID Turning tool with dxQ Profile

A17-900

This turning tool with excentric shaft is used for turning small pieces on high precision lathe machines. The tool is ground out of a blank with Ø3x40mm. To speed up the grinding process and reduce the wheel wear, 3 sides had been preground using profiled 1A1 wheel. The excentric shaft is used to be ground with a wider wheel to fit the lenght requirements and to grind it in one shot. The grinding time can be considerably reduced by using rougher pregrinding wheel.



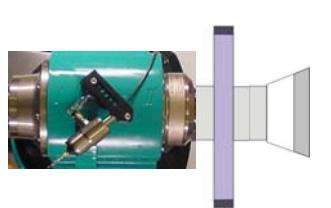
1. Cycletime for Production

Workpiece: Ø 3 mm Material: carbide										
Operations	Probe	End 2	End 1	Flat 1	Flat 2	Pregrinding	1st Clear.	2nd Clear.	Back side	Excentric
Feed [mm/Min]	2000	70	100	70	35	45	35	55	35	100
No. Of cycles		1	1	1	1	1	2	2	1	2
Cutting feed [m/s]		32	32	24	24	24	32	32	32	32
Used wheels		1	1	2	2	2	2	2	2	2
Grinding time [s]	10	25	25	35	30	30	55	55	30	120
Total cycle time	6.92 min									

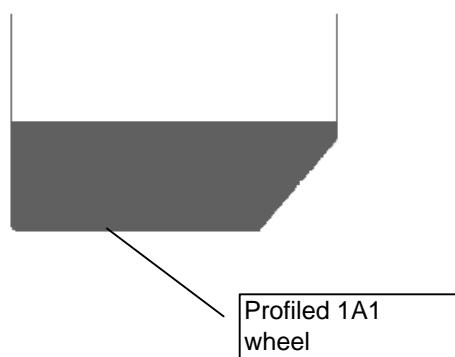
The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	1A1 Ø125 D64 90°
2	11V9 Ø75 D76 70°



1 2



3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG / Gemini DMR

Coolant: Synthetic Oil, pressure 6 bar

Control: Fanuc 160i

Software: Quinto 4.3

Accessories:

Responsible engineer: SIW, 21.12.2009

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